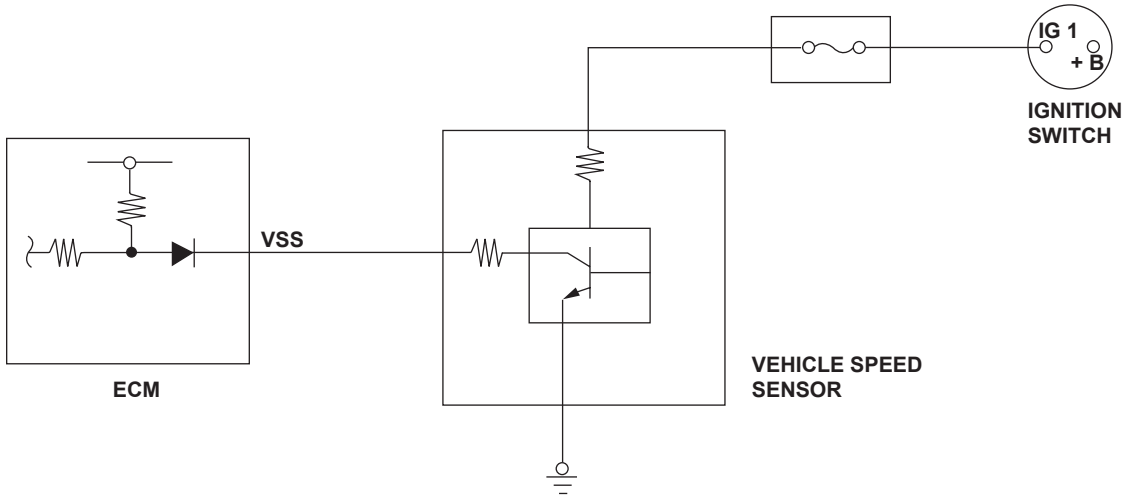
DTC P0500: Vehicle Speed Sensor (VSS) Circuit Malfunction



P0500-9601

General Description

The vehicle speed sensor (VSS) is attached to the transmission housing. The VSS outputs a pulsing signal for every revolution of the differential gear via the speedometer gear. The engine control module (ECM) determines the vehicle speed based on the frequency of these signals. If there is a loss of VSS signals to the ECM, the ECM detects a malfunction. If an open, a temporary open, or a short to ground causes a malfunction, a DTC is stored.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Continuous
Sequence	None
Duration	5 seconds
DTC Type	One drive cycle, MIL ON

Enable Conditions

Condition	Minimum	Maximum
Engine speed	—	4,000 rpm
Battery voltage	10.05 V	—
Engine condition	During fuel cut-off operation for deceleration	
No active DTCs	VSS	

Malfunction Threshold

The VSS signal stops for 5 seconds or more while the vehicle is being driven.
However, the failure detection speed is 4,000 rpm or less to avoid misdetection during fuel cut-off operation at high speed.

Driving Pattern

1. Start the engine. Hold the engine at 3,000 rpm with no load (in neutral) until the radiator fan comes on, then let it idle.
2. Drive the vehicle and accelerate once, then close the throttle fully and keep decelerating at a speed of 4,000 rpm or less for 5 seconds

- If you have difficulty to duplicating the DTC, retest after turning off electrical components such as the audio system and A/C, and try a different gear position.
- Drive the vehicle in this manner only if the traffic regulations and ambient conditions allow.

Diagnosis Details

Conditions for illuminating the MIL
When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored in the ECM memory.

Conditions for clearing the MIL
The MIL will be cleared if the malfunction does not recur during three consecutive trips in which the diagnostic runs.
The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.